



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.												
10/560,833	12/15/2005	Bernd Kurt Masuch	W1.2073 PCT-US	6899												
7590 Douglas R Hanscom Jones Tullar & Cooper Eads Station PO Box 2266 Arlington, VA 22202		01/14/2008	<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">HINZE, LEO T</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2854</td><td></td></tr><tr><td>MAIL DATE</td><td>DELIVERY MODE</td></tr><tr><td>01/14/2008</td><td>PAPER</td></tr></table>		EXAMINER		HINZE, LEO T		ART UNIT	PAPER NUMBER	2854		MAIL DATE	DELIVERY MODE	01/14/2008	PAPER
EXAMINER																
HINZE, LEO T																
ART UNIT	PAPER NUMBER															
2854																
MAIL DATE	DELIVERY MODE															
01/14/2008	PAPER															

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/560,833

Applicant(s)

MASUCH, BERND KURT

Examiner

Leo T. Hinze

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 20051215.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Objections

2. Claim 54 is objected to because of the following informalities: it appears that "in" in line 2 should be "is".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 31, 33, 34, 36, 41, 54-57, 59-63 are rejected under 35 U.S.C. 102(b) as being anticipated by Schaede et al., US 6,502,508 B1 (hereafter Schaede).

- a. Regarding claim 31, Schaede teaches a printing unit of a rotary printing press comprising: a first cylinder (01, Fig. 1) having a first cylinder barrel with a first cylinder radius (r03, Fig. 1); a second cylinder (02, Fig. 1) having a second cylinder radius (r04, Fig. 1), said first cylinder and said second cylinder defining a nip point in a print-on position (cylinder 01 is a counter-pressure cylinder, and cylinder 02 is a transfer/blanket cylinder,

Art Unit: 2854

Figs. 1, 3); first bearing rings (06, Fig. 1) assigned to said first cylinder and having a first bearing ring radius (r06, Fig. 1); and second bearing rings (07, Fig. 1) assigned to said second cylinder and having a second bearing ring radius (r07, Fig. 1), said first bearing ring radius being greater than said second bearing ring radius (r06=200.2 mm, r07 = 199.8 mm, col. 2, ll. 24-27).

b. Regarding claim 33, Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede also teaches wherein said first cylinder barrel radius (r03, Fig. 1) is greater than said second cylinder radius (r04, Fig. 1) in said print-on position (nominally, r03 is less than r04; however, during printing, when the second cylinder is pressed against the first, the diameter of the compressible second transfer cylinder 02 is less than the rigid counter-pressure cylinder 01).

c. Regarding claim 34, Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede also teaches wherein said first cylinder is a counter-pressure cylinder ("counter-pressure cylinder 01," col. 2, ll. 36-37).

d. Regarding claim 36, Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede also teaches wherein said second cylinder is a transfer cylinder ("transfer cylinder 02," col. 2, l. 18).

e. Regarding claim 41, Schaede teaches the printing unit of claim 36 as discussed in the rejection of claim 36 above. Schaede also teaches a counter-pressure cylinder having counter-pressure cylinder bearing rings, said transfer cylinder cooperating with said counter-pressure cylinder in said print-on position and defining a printing location (col. 2, ll. 15-23).

- f. Regarding claim 54, Schaede teaches the printing unit of claim 41 as discussed in the rejection of claim 41 above. Schaede also teaches wherein said transfer cylinder bearing ring radius ($r_{07} = 199.8$, col. 2, ll. 26-27) is smaller than said counter-pressure bearing ring radius ($r_{06} = 200.2$ mm, col. 2, l. 23).
- g. Regarding claim 55, Schaede teaches the printing unit of claim 41 as discussed in the rejection of claim 41 above. Schaede also teaches wherein said first cylinder radius (r_{03} , Fig. 1) in an area of said first cylinder barrel is greater than said transfer cylinder radius (r_{04} , Fig. 1) and said transfer cylinder radius is smaller than a radius of said counter-pressure cylinder (due to compression in the nip when printing, the blanket on the transfer cylinder compresses).
- h. Regarding claim 56, Schaede teaches the printing unit of claim 34 as discussed in the rejection of claim 34 above. Schaede also teaches wherein said counter-pressure cylinder is a satellite cylinder and is adapted to act with several second cylinders each having a compressible surface (Fig. 3).
- i. Regarding claim 57, Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede also teaches including a separate drive motor assigned to each said cylinder (19, Fig. 3).
- j. Regarding claim 59, Schaede teaches the printing unit of claim 34 as discussed in the rejection of claim 34 above. Schaede also teaches an independent drive motor assigned to said counter pressure cylinder (19, Fig. 3).

k. Regarding claim 60, Schaede teaches the printing unit of claim 56 as discussed in the rejection of claim 56 above. Schaede also teaches wherein said printing unit is a nine-cylinder printing unit (Fig. 3).

l. Regarding claim 61, Schaede teaches the printing unit of claim 56 as discussed in the rejection of claim 56 above. Schaede also teaches wherein said printing unit is a ten-cylinder printing unit (Fig. 4).

m. Regarding claim 62, Schaede teaches the printing unit of claim 61 as discussed in the rejection of claim 61 above. Schaede also teaches first and second counter-pressure cylinders (two cylinders 01, Fig. 4) and a drive motor for said first and second counter-pressure cylinders (19, Fig. 4).

n. Regarding claim 63, Schaede teaches the printing unit of claim 61 as discussed in the rejection of claim 61 above. Schaede also teaches including first and second counter-pressure cylinders and a separate drive motor for each of said first and second counter-pressure cylinders (19, Fig. 3).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 32, 43, 45, 47, 49, 51-53, and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaede.

a. Regarding claim 32:

Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede also teaches wherein said first cylinder (01, Fig. 1) barrel radius (r_{03} = 200.025 mm) is less than said first cylinder (06, Fig. 1) bearing ring radius (r_{06} = 200.2mm). Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein said first cylinder barrel radius is greater than said first cylinder bearing ring radius.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein said first cylinder barrel radius is greater than said first cylinder bearing ring radius, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make

changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

b. Regarding claim 43:

Schaede teaches the printing unit of claim 34 as discussed in the rejection of claim 34 above. Schaede also teaches wherein said first cylinder (01, Fig. 1) barrel radius ($r_{03} = 200.025$ mm) is less than said first cylinder (06, Fig. 1) bearing ring radius ($r_{06} = 200.2$ mm), resulting in a ratio of said counter-pressure cylinder radius to said first bearing rings radius is .999 to 1. Schaede teaches that "it will be apparent to one of skill in the art that a number of changes... could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein a ratio of said counter-pressure cylinder radius to said first bearing rings radius is between 1.004 to 1 and 1.0012 to 1.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to

optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein a ratio of said counter-pressure cylinder radius to said first bearing rings radius is between 1.004 to 1 and 1.0012 to 1, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

c. Regarding claim 45:

Schaede teaches the printing unit of claim 43 as discussed in the rejection of claim 43 above. Schaede also teaches wherein said first cylinder (01, Fig. 1) barrel radius (r_{03} = 200.025 mm) is less than said first cylinder (06, Fig. 1) bearing ring radius (r_{06} = 200.2mm), resulting in a ratio of said counter-pressure cylinder radius to said first bearing rings radius is .999 to 1. Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics

Art Unit: 2854

of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein a ratio of said counter-pressure cylinder radius to said first bearing rings radius is between 1.006 to 1 and 1.0009 to 1.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein a ratio of said counter-pressure cylinder radius to said first bearing rings radius is between 1.006 to 1 and 1.0009 to 1, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

d. Regarding claim 47:

Schaede teaches the printing unit of claim 41 as discussed in the rejection of claim 41 above. Schaede also teaches wherein a radius of said counter-pressure bearing rings ($r_{06} = 200.2\text{mm}$) is 0.4 mm greater than said transfer cylinder bearing rings radius ($r_{07} = 199.8$). Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein a radius of said counter-pressure bearing rings is between 0.01 mm and 0.03 mm greater than said transfer cylinder bearing rings radius.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein a radius of said counter-pressure bearing rings is between 0.01 mm and 0.03 mm greater than said transfer cylinder bearing rings radius, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing

press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

e. Regarding claim 49:

Schaede teaches the printing unit of claim 34 as discussed in the rejection of claim 34 above. Schaede also teaches wherein said counter-pressure cylinder barrel radius ($r_{03} = 200.025$ mm) is less than said first bearing ring radius ($r_{06} = 200.2$ mm). Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein said counter-pressure cylinder barrel radius is greater than said first bearing ring radius.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04(IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein said counter-pressure cylinder barrel radius is greater than said first bearing ring radius, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

f. Regarding claim 51:

Schaede teaches the printing unit of claim 34 as discussed in the rejection of claim 34 above. Schaede also teaches wherein said counter-pressure cylinder barrel radius ($r_{03} = 200.025$ mm) is less than said first bearing ring radius ($r_{06} = 200.2$ mm). Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein said counter-pressure cylinder radius is greater than said first bearing ring radius by from 0.06 mm to 0.18 mm.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein said counter-pressure cylinder radius is greater than said first bearing ring radius by from 0.06 mm to 0.18 mm, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

g. Regarding claim 52:

Schaede teaches the printing unit of claim 34 as discussed in the rejection of claim 34 above. Schaede also teaches wherein said counter-pressure cylinder barrel radius ($r_{03} = 200.025$ mm) is less than said first bearing ring radius ($r_{06} = 200.2$ mm). Schaede teaches that "it will be apparent to one of skill in the art that a number of changes... could be made without departing from the true spirit and scope of the present invention" (col. 4, l.

66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein said counter-pressure cylinder radius is greater than said first bearing ring radius by from 0.08 mm to 0.16 mm.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein said counter-pressure cylinder radius is greater than said first bearing ring radius by from 0.08 mm to 0.16 mm, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

h. Regarding claim 53:

Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede also teaches wherein said first bearing ring radius ($r_{06} = 200.2$ mm) is greater than said second bearing ring radius ($r_{07} = 199.8$ mm) by from 0.04 mm. Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein said first bearing ring radius is greater than said second bearing ring radius by from 0.015 mm to 0.25 mm.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein said first bearing ring radius is greater than said second bearing ring radius by from 0.015 mm to 0.25 mm, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary

skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

i. Regarding claim 58:

Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede also teaches one drive motor assigned to each of said first cylinder and said second cylinder. Schaede teaches that "it will be apparent to one of skill in the art that a number of changes... could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach one drive motor assigned to said first cylinder and said second cylinder.

It has been held that mere reduction and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(B) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize

values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein said first bearing ring radius is greater than said second bearing ring radius by from 0.015 mm to 0.25 mm, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and reduction of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

7. Claims 35, 37-40, 42, 44, 46, 48, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaede in view of Bolza-Schünemann, WO 00/54970 (hereafter Bolza-Schünemann; references are to US equivalent 6,782,816 B1).

a. Regarding claim 35:

Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede teaches a forme cylinder (27, Fig. 2), but is silent as to whether it includes a bearer ring. Schaede also teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that

compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein said first cylinder is a forme cylinder.

Bolza-Schünemann teaches a rotary printing press having (Figs. 2, 3) having a two transfer cylinders (37, Fig. 2, each acting as a counter-pressure cylinder for the other) and two forme cylinders (23, Fig. 2). Each of the transfer cylinders has bearer rings (54, 56, Fig. 2) as does each of the forme cylinders (52, 53).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein the forme cylinder includes a bearer ring as taught by Bolza-Schünemann, because one having ordinary skill in the art could easily substitute the known apparatus of Bolza-Schünemann to provide expected results such as compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

b. Regarding claim 37:

Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede teaches wherein the second cylinder is a transfer cylinder (02, Fig. 2), and a forme cylinder (27, Fig. 3), but is silent as to whether the forme cylinder includes a bearer ring. Schaede also teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the

present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein said first cylinder is a forme cylinder.

Bolza-Schünemann teaches a rotary printing press having (Figs. 2, 3) having a two transfer cylinders (37, Fig. 2, each acting as a counter-pressure cylinder for the other) and two forme cylinders (23, Fig. 2). Each of the transfer cylinders has bearer rings (54, 56, Fig. 2) as does each of the forme cylinders (52, 53).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein the forme cylinder includes a bearer ring as taught by Bolza-Schünemann, because one having ordinary skill in the art could easily substitute the known apparatus of Bolza-Schünemann to provide expected results such as compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

c. Regarding claim 38:

Schaede teaches the printing unit of claim 31 as discussed in the rejection of claim 31 above. Schaede teaches a forme cylinder (27, Fig. 2), but is silent as to whether it includes a bearer ring; and further including a compressible printing forme on said forme cylinder ("forme" cylinder implies presence of a compressible printing forme). Schaede also teaches that "it will be apparent to one of skill in the art that a number of

changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

Schaede does not teach wherein said second cylinder is a forme cylinder.

Bolza-Schünemann teaches a rotary printing press having (Figs. 2, 3) having a two transfer cylinders (37, Fig. 2, each acting as a counter-pressure cylinder for the other) and two forme cylinders (23, Fig. 2). Each of the transfer cylinders has bearer rings (54, 56, Fig. 2) as does each of the forme cylinders (52, 53).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein the forme cylinder includes a bearer ring as taught by Bolza-Schünemann, because one having ordinary skill in the art could easily substitute the known apparatus of Bolza-Schünemann to provide expected results such as compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

d. Regarding claim 39:

The combination of Schaede and Bolza-Schünemann teaches the printing unit of claim 35 as discussed in the rejection of claim 35 above. Schaede also teaches wherein a ratio of said first cylinder radius ($r_{03} = 200.25 \text{ mm}$) to said second cylinder radius ($r_{04} = 200.115 \text{ mm}$) is 1.0006 to 1. Schaede teaches that "it will be apparent to one of skill in the

art that a number of changes....could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

The combination of Schaede and Bolza-Schünemann does not teach wherein a ratio of said first cylinder radius to said second cylinder radius at said nip point is between 1.0015 to 1 and 1.0030 to 1.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify Schaede wherein a ratio of said first cylinder radius to said second cylinder radius at said nip point is between 1.0015 to 1 and 1.0030 to 1: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences,

favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

e. Regarding claim 40, the combination of Schaede and Bolza-Schünemann teaches the printing unit of claim 39 as discussed in the rejection of claim 39 above. The combination of Schaede and Bolza-Schünemann also teaches wherein said second cylinder is a transfer cylinder and further including a compressible layer on said transfer cylinder (Schaede: 02, Fig. 3 – 27 and 01 have rigid surfaces, and 02 traditionally has compressible surface to provide good transfer of ink between rollers and onto substrate).

f. Regarding claim 42, the combination of Schaede and Bolza-Schünemann teaches the printing unit of claim 40 as discussed in the rejection of claim 40 above. The combination of Schaede and Bolza-Schünemann also teaches a counter-pressure cylinder (Schaede: 01, Fig. 3) having counter-pressure cylinder bearing rings (Schaede: 06, Fig. 2), said transfer cylinder (Schaede: 02, Fig. 3) cooperating with said counter-pressure cylinder in said print-on position and defining a printing location (Schaede: Fig. 3).

g. Regarding claim 44:

The combination of Schaede and Bolza-Schünemann teaches the printing unit of claim 42 as discussed in the rejection of claim 42 above. The combination of Schaede and Bolza-Schünemann also teaches wherein said first cylinder (Schaede: 01, Fig. 1) barrel radius (Schaede: $r_{03} = 200.025$ mm) is less than said first cylinder (Schaede: 06, Fig. 1) bearing ring radius (Schaede: $r_{06} = 200.2$ mm), resulting in a ratio of said counter-pressure cylinder radius to said first bearing rings radius is .999 to 1. Schaede teaches that "it will

be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

The combination of Schaede and Bolza-Schünemann does not teach wherein a ratio of said counter-pressure cylinder radius to said first bearing rings radius is between 1.004 to 1 and 1.0012 to 1.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify Schaede wherein a ratio of said counter-pressure cylinder radius to said first bearing rings radius is between 1.004 to 1 and 1.0012 to 1, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature

Art Unit: 2854

differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

h. Regarding claim 46:

The combination of Schaede and Bolza-Schünemann teaches the printing unit of claim 44 as discussed in the rejection of claim 44 above. The combination of Schaede and Bolza-Schünemann also teaches wherein said first cylinder (Schaede: 01, Fig. 1) barrel radius (Schaede: $r_{03} = 200.025$ mm) is less than said first cylinder (Schaede: 06, Fig. 1) bearing ring radius (Schaede: $r_{06} = 200.2$ mm), resulting in a ratio of said counter-pressure cylinder radius to said first bearing rings radius is .999 to 1. Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (col. 1, ll. 49-56).

The combination of Schaede and Bolza-Schünemann does not teach wherein a ratio of said counter-pressure cylinder radius to said first bearing rings radius is between 1.006 to 1 and 1.0009 to 1.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to

optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to further modify Schaede wherein a ratio of said counter-pressure cylinder radius to said first bearing rings radius is between 1.006 to 1 and 1.0009 to 1, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

i. Regarding claim 48:

The combination of Schaede and Bolza-Schünemann teaches the printing unit of claim 42 as discussed in the rejection of claim 42 above. The combination of Schaede and Bolza-Schünemann also teaches wherein a radius of said counter-pressure bearing rings (Schaede: $r_{06} = 200.2\text{mm}$) is 0.4 mm greater than said transfer cylinder bearing rings radius (Schaede: $r_{07} = 199.8$). Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (Schaede: col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear

characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (Schaede: col. 1, ll. 49-56).

The combination of Schaede and Bolza-Schünemann does not teach wherein a radius of said counter-pressure bearing rings is between 0.01 mm and 0.03 mm greater than said transfer cylinder bearing rings radius.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein a radius of said counter-pressure bearing rings is between 0.01 mm and 0.03 mm greater than said transfer cylinder bearing rings radius, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

j. Regarding claim 50:

The combination of Schaede and Bolza-Schünemann teaches the printing unit of claim 35 as discussed in the rejection of claim 35 above. The combination of Schaede and Bolza-Schünemann also teaches wherein said forme cylinder barrel radius (Schaede: $r_{03} = 200.025$ mm) is less than said first bearing ring radius (Schaede: $r_{06} = 200.2$ mm). Schaede teaches that "it will be apparent to one of skill in the art that a number of changes...could be made without departing from the true spirit and scope of the present invention" (Schaede: col. 4, l. 66 – col. 5, l. 5). Schaede further teaches that compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press (Schaede: col. 1, ll. 49-56).

The combination of Schaede and Bolza-Schünemann does not teach wherein said forme cylinder barrel radius is greater than said first bearing ring radius.

It has been held that mere changes in size and/or rearrangement of parts is not sufficient to patentably distinguish an invention over the prior art. See MPEP §§ 2144.04 (IV)(A) and 2144.04(VI)(C). It has further been held that mere routine experimentation to optimize values of ranges is not sufficient to patentably distinguish an invention over the prior art. See MPEP § 2144.05(II)(A).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Schaede wherein said counter-pressure cylinder barrel radius is greater than said first bearing ring radius, because: this configuration could be easily arrived at from routine experimentation and/or simple rearrangement and re-sizing

of components; Schaede teaches that one having ordinary skill in the art may make changes to the rotary printing press; and one having ordinary skill in the art would be motivated to experiment and make changes to the rotary printing press with the goal of obtaining compensation for effects based on temperature differences, favorable wear characteristics of bearing rings, and motors having power consumptions of approximately the same magnitude are all desirable design characteristics of a rotary printing press.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

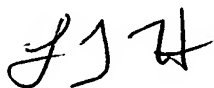
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is 571.272.2864. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571.272.2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service

Art Unit: 2854

Representative or access to the automated information system, call 800-786-9199 (IN
USA OR CANADA) or 571-272-1000.



Leo T. Hinze
Patent Examiner
AU 2854
03 January 2007



JUDY NGUYEN
SUPERVISORY PATENT EXAMINER